

REMARKS

Claims 1-30 and 34-37 will be pending upon entry of the amendment. Claims 31-33 were previously cancelled. Applicants acknowledge with gratitude that claims 17-30 and 37 have been allowed and that claims 5, 7-10, 12, 13 and 15 are objected to only as depending on a rejected base or intervening claim.

General Remarks

Conventional poles for use in land surveying are equipped with a sharp steel point to precisely locate the pole on the ground. However in circumstances where the ground is soft, it is undesirable to have the point engaging the ground because the point tends to penetrate the surface. If penetration occurs, the pole height will be inconsistent and even a small variation in pole height may produce significant error in surveying. Conventionally to avoid ground penetration, the steel point has been removed and replaced with a blunt or greatly enlarged blunt end. This conventional system is shown by SECO (attachment 1 to Office action). The point replacement involves several steps and it is necessary to carry the blunt end (or the steel point) around separately from the pole until used.

Applicants' claimed invention relates to a prism pole with a point 44 covered by a shoe 46 as shown in Fig. 21. The shoe body 140 includes external threads 140C located just below a larger, knurled head 140D which contacts the end face of the male fitting 116 when the point 44 is attached to the surveying pole 26. These threads 140C mount the shoe 46 directly on the point 44 so that the shoe can be used without removing the point. As a result, it is unnecessary to remove the point 44 when it is not needed, as it can simply be covered up by the shoe 46. Thus, the time and costs associated with removing the steel point and replacing with a blunt end is eliminated. Furthermore, the shoe 46 sheathes the point 44 during transport which protects both the tip 142 and personnel. When not in use, the shoe 46 can be conveniently stowed on the surveying pole. As a result, the potential of losing a loose point or blunt end is substantially reduced.

The claimed features provide a very material advantage in the field of surveying poles.

Response to Rejection of Claim 1

Claim 1 is directed to a surveying pole for use in locating a position in a survey of land comprising:

- (a) at least one pole section,
- (b) a point mounted on a lower end of said one pole section for engaging the ground, and
- (c) a shoe sized and shaped for covering the point,
- (d) the shoe being formed for releasable connection of the shoe to the surveying pole over the point to selectively cover the point,
- (e) the shoe having a blunt bottom wall engageable with the ground where the shoe covers the point,
- (f) whereby the surveying pole is capable of selective configuration for use in terrain having different surface properties without removal of the point.

Claim 1 is submitted as unanticipated by and patentable over the references of record, including SECO, in that none of them show a surveying pole having a shoe sized and shaped for covering the point where the shoe has a blunt bottom wall and is formed for releasable connection of the shoe to the surveying pole over the point to selectively cover the point to selectively configure the pole for use in terrain having different surface properties without removal of the point.

The shoes (part nos. 5191, 5192 and 5193) manufactured by SECO Manufacturing, Inc. are conventional blunt ends as described above. Shoe 5191 is a typical blunt end, shoe 5192 is a greatly enlarged blunt end and shoe 5193 is a typical blunt end with a point extending outward from the center of its end face. Each of the SECO shoes requires that the point be removed prior to the shoe being connected to the surveying pole because the shoe connects to the pole using the same threads as the point. Accordingly, the SECO shoes cannot be connect to a survey pole while a point is still attached. As a result, SECO fails to show a surveying pole having a shoe sized and shaped for covering the point where the shoe has a blunt bottom wall and is formed for releasable connection of the shoe to the surveying pole over the point to selectively cover the point to selectively configure the pole for use in terrain having different surface properties without removal of the point, as required by claim 1. Thus, claim 1 is unanticipated by and patentable over SECO and the other references of record.

Claims 2-16, depending directly or indirectly from claim 1, are submitted as patentable for at least the same reasons as claim 1.

Response to Rejection of Claims 2 & 3

Claim 2, depending directly from claim 1, further requires that the point is formed for releasable connection of the shoe thereto. The SECO Geodimeter-style "Quick Release" Prism

Pole is a prism pole with a replaceable tip, shown on the displayed pole as a point. The SECO Geodimeter-style "Quick Release" Prism Pole fails all together to teach the use of a shoe. Accordingly, SECO altogether fails to disclose a point formed for releasable connection of a shoe as required by Claim 2. Nowhere in the SECO references is a shoe shown to be attached to a point. In fact, SECO teaches that the point needs to be removed prior to engaging the shoe and that the shoe is engageable with the surveying pole and not the point. Thus, claim 2 is unanticipated by and patentable over SECO and the other references of record.

Claim 3 depends from claim 2 and further requires the point and shoe each have threads formed thereon which are interengageable for connecting the shoe to the point in a position substantially covering the point. Thus, claim 3 is unanticipated by and patentable over SECO and the other references of record for the same reasons as claim 2.

CONCLUSION

In view of the foregoing, favorable consideration of claims 1-30 and 34-37 as now presented is respectfully requested.

The Commissioner is hereby authorized to charge any underpayment and credit any overpayment of government fees to Deposit Account No. 19-1345.

Respectfully submitted,



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